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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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09/919,406

07/31/2001

Nigel Street

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23280

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08/13/2004

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EXAMINER

NAHAR, QAMRUN

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/919,406 | STREET ET AL. | |
| | Examiner | Art Unit | |
| | Qamrun Nahar | 2124 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-33 have been examined.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR **1.56**.

That is, 37 CFR **1.56** has to be stated in the oath or declaration, not only part of it.

Claim Objections

3. Claim 27 is objected to because of the following informalities: “a host computing environment” on line 3 of the claim should be “**the** host computing environment”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10 and 27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 10 recites “wherein the WindView development tool is a WindView 1.0 development tool” on lines 1-2 of the claim, which renders the claim indefinite because claim 10 depends on claim 9, where claim 9 claims WindView 2.0 development tool. The WindView development tool can be either WindView 1.0 development tool or WindView 2.0 development tool, **not** both. Therefore, claim 10 is interpreted as *depending on claim 8*.

7. Claim 27 recites the limitation "the display" in line 6 of the claim. There is insufficient antecedent basis for this limitation in the claim. This limitation is interpreted as “a display”.

Claims 28-30 are rejected for dependency upon rejected base claim 27 above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilner (U.S. 5,872,909) in view of Chen (U.S. 5,806,062).

Per Claim 1:

Wilner teaches a method for collecting and displaying object interaction on a target comprising the steps of: logging object interaction data on a target over a monitoring period (“The present invention logs events which occur in the target software, and stores these in a

buffer for periodic uploading to a host computer. Such events include context switching times of particular software tasks, and task status at such context switch times, along with events triggering such a context switch or other events.” in column 2, lines 34-39); and displaying the object interaction data as a graph (column 2, lines 39-62). Wilner does not explicitly teach that the graph having a plurality of nodes and at least one line, each node being associated with a corresponding object, each line connecting two of the nodes and representing an interaction between the respective objects associated with the two nodes. Chen teaches that the graph having a plurality of nodes and at least one line, each node being associated with a corresponding object, each line connecting two of the nodes and representing an interaction between the respective objects associated with the two nodes (column 12, lines 31-67).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Wilner to display a graph having a plurality of nodes and at least one line, each node being associated with a corresponding object, each line connecting two of the nodes and representing an interaction between the respective objects associated with the two node using the teaching of Chen. The modification would be obvious because one of ordinary skill in the art would be motivated to display relationships between objects (Chen, column 12, lines 4-27).

Per Claim 2:

The rejection of claim 1 is incorporated, and Wilner further teaches wherein the displaying step comprises displaying the graph on a host computing environment, and wherein the method further comprises the step of, prior to the displaying step, uploading the logged

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object interaction data from the target to the host computing environment (column 2, lines 39-62).

Per Claim 3:

The rejection of claim 1 is incorporated, and Wilner further teaches wherein the object interaction data is operating system object interaction data (column 2, lines 34-39).

Per Claim 4:

The rejection of claim 1 is incorporated, and Wilner further teaches wherein the step of logging object interaction data comprises recording interactions between operating system objects, the operating system objects including one or more of a semaphore, an ISR, a task and a memory call (column 20, lines 63-67 to column 21, lines 1-45).

Per Claim 5:

The rejection of claim 1 is incorporated, and Chen further teaches wherein each line is terminated with at least one arrow (column 12, lines 31-67).

Per Claim 6:

The rejection of claim 5 is incorporated, and Chen further teaches wherein each arrow on each line is indicative of a direction of interaction between the two nodes connected by said each line (column 12, lines 31-67).

Per Claim 7:

The rejection of claim 1 is incorporated, and Chen further teaches further comprising the step of accepting, as input from a user, a query for information regarding the logged object interaction data and displaying information responsive to the query to the user (column 13, lines 43-67 to column 14, lines 1-38).

Per Claim 8:

The rejection of claim 1 is incorporated, and Wilner further teaches wherein the logging step is performed by a WindView development tool (column 4, lines 35-46).

Per Claim 9:

The rejection of claim 8 is incorporated, and Wilner further teaches wherein the WindView development tool is a WindView 2.0 development tool (column 4, lines 35-46).

Per Claim 10 (as best understood):

The rejection of claim 8 is incorporated, and Wilner further teaches wherein the WindView development tool is a WindView 1.0 development tool (column 4, lines 35-46).

Per Claim 11:

The rejection of claim 1 is incorporated, and Wilner further teaches wherein the logging step is performed by a Linux Trace Toolkit development tool (column 4, lines 47-53).

Per Claims 12-13:

These are system versions of the claimed method discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 14:

The rejection of claim 1 is incorporated, and Chen further teaches wherein the executable graphing component and the executable logging component both execute on a common processor (column 4, lines 31-59).

Per Claims 15-17:

These are system versions of the claimed method discussed above, claim 2, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 18-26:

These are system versions of the claimed method discussed above (claims 3-11, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 27 (as best understood):

This is a host computing environment version of the claimed method discussed above (claims 1 and 2), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claims 28-30 (as best understood):

These are host computing environment versions of the claimed method discussed above (claims 5-7, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 31:

This is a computer readable media version of the claimed method discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 32:

The rejection of claim 1 is incorporated, and Wilner further teaches further comprising the steps of: identifying isolated objects based upon the logged interaction data; and generating a protection domain for the isolated objects (column 21, lines 28-45).

Per Claim 33:

The rejection of claim 32 is incorporated, and Wilner further teaches wherein the protection domain is a VxWorks AE protection domain (column 15, lines 58-67 to column 16, lines 1-2; and column 21, lines 28-45).

Conclusion

10. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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QN

August 6, 2004

Kakali Chaki

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